Remarks/Arguments

The Office Action dated September 17, 2007 has been received and carefully studied. The Examiner objects to the drawings under 37 C.F.R. 1.83(a). The Examiner states that the drawing must show every feature of the invention specified in the claims, and requires that the wireless transceiver, external programmer and embedded microprocessor be shown. By virtue of the accompanying amendment, Figure 6 has been added. This Figure shows the electronic components of the CSF controller. No new matter has been entered, as this information appears in paragraph 38. In addition, paragraph 38 has been amended to add reference designators corresponding to the new Figure 6.

The Examiner rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by Cowan, Jr. et al (U.S. Patent No. 6,585,677).

With respect to claim 1, the Examiner states that Cowan, Jr. teaches a system for non-invasively monitoring the operation and performance of an implanted cerebrospinal shunting system, comprising an implanted controller 24 located in the patient's abdomen; said controller 24 further comprising an inclination sensor in the form of an accelerometer within valve-gauge assembly 52, a pressure sensor, a wireless transceiver in the form of transmitter 64 that is operable to receive and emit or transmit information with an external programmer external to the patient, and a embedded microprocessor within diagnostic unit 60 housed within the controller 24.

Claim 1 has been amended to include a multi mode drainage system. This drainage system utilizes a first mode while the patient is supine and a second mode when the patient is upright. Such a configuration is not disclosed or suggested by Cowans. Thus, claim 1 is now believed to be in condition for allowance.

The Examiner rejects claims 2 under 35 U.S.C. §103(a) as being unpatentable over Cowan, Jr. et al. The Examiner states that Cowan teaches that the external computing device can automatically diagnose malfunction or infection and/or pass data to a doctor. The Examiner concludes that is would be obvious to one of ordinary skill in the art to modify the device of Cowan such that, once a diagnosis is made, the external programmer wirelessly transmits data and commands to the controller to being a treatment process involving a proper amount of CSF drainage.

This rejection is respectfully traversed. The Examiner states that it would be obvious to one of ordinary skill in the art to modify the device so that the control transmits data and commands to the controller for treatment. However, it is believed that this modification is not obvious. In fact, Cowan contemplated the use of a transceiver in the disclosure, whereby data could be transmitted to the controller from an external device. Cowan discloses the the transceiver "would also accept uploaded information to shunt 20 from an external computing device. Such uploaded information can include, for example, reprogramming instructions for software programming used in the operation of in valve-gauge assembly 52 and/or diagnostic unit 60". (Column 7; lines 40-48). Cowan enumerated potential uses of

the device if a transceiver were utilized. Clearly, if the use of the external programmer to command the controller were obvious, Cowan would have suggested such a usage in the disclosure. Rather, Cowan only suggests that incoming data can be used to reprogram the device, which is a different function than that recited in claim 2. Furthermore, by virtue of dependence of claim 2 on claim 1, claim 2 is not unpatentable, since all of the recited elements of claim 1 are not disclosed.

Finally, the controller of the present invention, in conjunction with the external programmer, can execute diagnostic algorithms to determine a number of different parameters. These parameters include the distal flow resistance of the shunt in the supine mode from the pressure sensor to the distal end of the shunt, the supine flow rate, cranial compliance, the proximal shunt flow resistance and regular monitoring of cerebrospinal fluid shunt flow resistance. This is not disclosed by Cowan.

Claims 17-24 have been added to further define the invention. Reconsideration and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

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